

NUCLEAR DIVISION NEWS

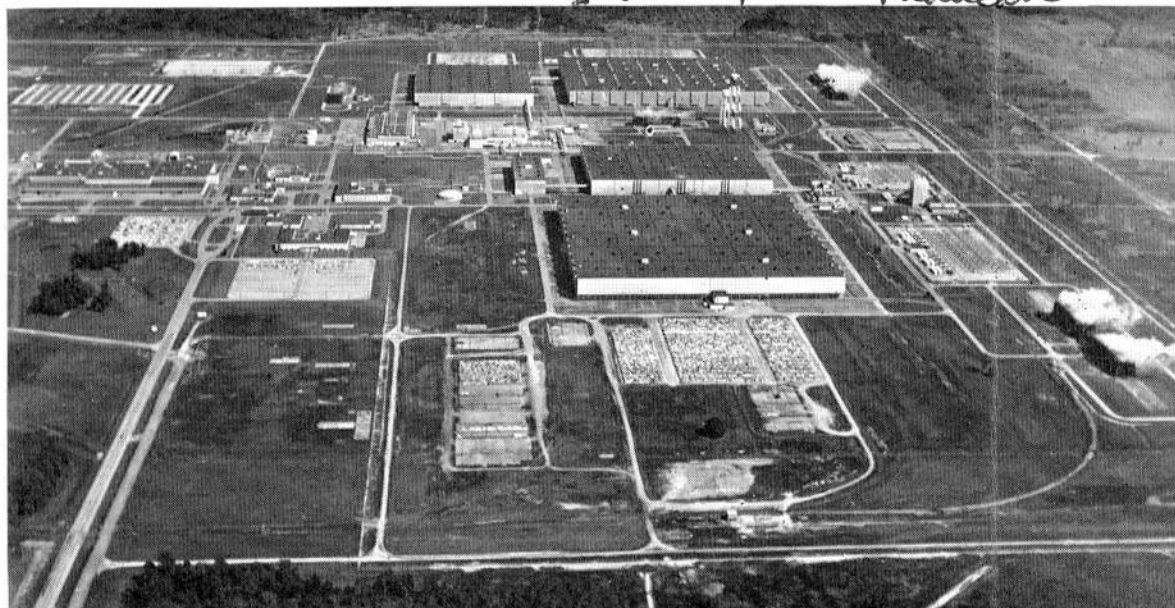
UNION
CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 1 — No. 5

OAK RIDGE, TENNESSEE

Thursday, April 9, 1970



The Paducah Gaseous Diffusion Plant

Organized by Red Cross

Volunteers Sought for Blood Program

Carbide employees are being asked to support an important new community service — the Oak Ridge-Anderson County Red Cross Blood Program.

The program, now in effect after several years of planning, serves all residents of Anderson County and the city of Oak Ridge, including Ridgers who live in Roane County. The program provides free blood to qualified persons needing it, at any hospital in Anderson County or elsewhere.

Oak Ridge and Anderson County residents are automatically covered and need not be donors to qualify. Residents of other counties may qualify themselves and their families for six months by donating a pint of blood.

Average Cost Reduced

The program organizers emphasize that the blood service will be available "whenever you need it, wherever you need it." Approval

was obtained "all the way down the line," including medical associations, all county hospitals, the Public Health Service, and the Red Cross Regional Blood Center in Nashville. Red Cross volunteers and staff will handle necessary arrangements in communities where hospitals are not formally a part of the plan.

The only cost to recipients is for the hospital charges connected with administering the blood. The blood itself is free. At Oak Ridge Hospital, for example, the overall cost has been reduced from \$60.50 to \$32 for a pint of blood.

Two Steps Requested

According to Julian ("Mark") Marcum, of the Auditing Division and Red Cross spokesman for the program, the success of the new program depends entirely upon volunteer blood contributions. Although Oak Ridge and Anderson County residents are automatical-

ly covered, he said, the program can continue to exist only as long as volunteers meet a blood donation quota "based on actual usage in the county."

Carbide employees willing to be blood donors should do two things.

BEFORE APRIL 15 — Volunteer by signing pledge cards available in ORGDP in the Benefit Plans Office, Room C-136, Bldg. K-1001; and in Y-12, Benefit Plans, Room 141, Bldg. 9704-2, and the Shift's Nurses' office, 9706-2. The cards will be forwarded to local Red Cross officials, who will use them to establish and maintain files on potential donors.

ON APRIL 16 and 17 — Call special Red Cross number 483-0211 between the hours of 8 a.m. and 5 p.m. The Red Cross representative will answer questions about the program and explain your options about times for giving blood.

Blood donations will be scheduled in the employee's non-work-
(Continued on Page 6)

Fritts Selected For New Post

Charles A. Fritts, Jr., Purchasing Agent for the Nuclear Division, has been appointed Head of Finance and Materials at the Paducah Gaseous Diffusion Plant.

Fritts succeeds H. H. Osborne whose appointment as General Purchasing Agent for the Division recently was announced.

A native of Gatliff, Ky., Fritts attended Hiram (Ohio) College. He served during World War II in the Army Signal Corps and the U. S. Air Force, joining the Nuclear Division in 1946.

In his 24 years as a member of the Nuclear Division staff, Fritts has served as an associate engineer, field inspector and buyer supervisor, and was appointed Purchasing Agent in 1958.

In his new position at the Paducah plant, Fritts will have overall responsibility for the purchasing and materials, data and office services, and accounting and payroll functions.

While in Oak Ridge, Fritts has been a member of the Anderson County Purchasing Commission



Moving to Paducah

and the Benevolent and Protective Order of Elks.

He is married to the former Marke Logan, Barbourville, Ky. They have four children: Mrs. Robin (Charlotte) Textor, Philadelphia, Pa.; David L., who is serving with the U. S. Army in Korea after spending a year in Viet Nam; and 13-year-old twin daughters, Patti and Pam, who live with their parents at 104 Emerson Circle, Oak Ridge.

Clark Center Park To Open April 13

The Clark Center Recreation Park on Melton Hill Lake officially opens Monday, April 13.

Employees in the Nuclear Division are required to have CCRP decals on the front bumpers of their autos to enter the park. There will be guards on the gates next week to enforce this ruling.

If you obtained a decal last year, there is no need to obtain a new one. You are authorized to use the decal as long as you own the car.

When trading an automobile, the decal is to be scraped or defaced in some way so that unauthorized persons cannot use the decal.

The decals are available through the Recreation Departments of Y-12, Building 9711-5, telephone 3-7109; or ORGDP, Building K-1002, telephone 3-3097.

New Project for Disadvantaged Scheduled at Paducah Facility

A one-year project designed to train the disadvantaged for skilled industrial jobs will get under way about June 1 at the Paducah Gaseous Diffusion Plant.

As part of the program—known as Functional Industrial Training (FIT)—more than 80 persons will be trained as arc welders, instrument repairmen, mechanical draftsmen and electrical draftsmen.

The basic concept of FIT is to give unemployed and underemployed persons a marketable skill so that they may contribute to a modern industrialized society. It is expected

that 35 percent of the graduates will be employed at the Paducah Gaseous Diffusion Plant. Others will be placed with industrial firms presently in the Paducah area.

Ages 18-21

Youths Are Named For Summer Jobs In YOP Program

More than 50 economically disadvantaged young people have been selected for the Youth Opportunity program involving summer jobs at the Nuclear Division.

The program is open to high school graduates or students between the ages of 18 and 21 who are planning to continue their education either in college, business, vocational, or technical schools. Participants this year are about equally divided between black and white students.

Participants will report in mid-June to work for about ten weeks at a base salary of \$330 per month.

This will be the fifth year for the Oak Ridge facilities to participate in the program. Fourteen students will work at the Oak Ridge National Laboratory, 25 at the Oak Ridge Gaseous Diffusion Plant, and 13 at the Oak Ridge Y-12 Plant.

Union Carbide's Central Employment staff members worked with high school guidance counselors in several counties to find suitable candidates for the program. Thirty-five schools in Anderson, Blount, Knox, Loudon, Morgan and Roane Counties were contacted. Assistance in the recruitment also was provided by the Community Action Centers, Neighborhood Job Corps, and State Employment Offices in Knoxville, Harriman, Oak Ridge and Maryville.

Cooperating Sponsors

The cost of the program, \$313,880, is being borne by the U. S. Department of Labor, Atomic Energy Commission and the State of Kentucky. The Department of Labor is providing \$224,610; the AEC \$55,000 and the Paducah training facilities; and the State of Kentucky, \$34,270.

Union Carbide will furnish the skilled instructors for the project while Murray State University will provide the administrative staff, counseling and testing services, and remedial instruction. The Atomic Energy Commission will provide facilities and equipment. Trainee recruitment and job placement will be the responsibility of the Kentucky Department of Economic Security.

Participants in the drafting course will have approximately 40 weeks of training. The first 26 weeks of training will be at the West Kentucky Vocational School. The trainees will then receive between 14 and 18 weeks of additional instruction at the Paducah Gaseous Diffusion Plant.

'Spinoff' From TAT

Welding trainees will participate in a 20-week course, while the program for instrument repairmen will last 50 weeks.

The State of Kentucky is being considered the basic recruitment area for participants. Generally, primary consideration will be given to persons with a minimum of an eighth grade education.

The FIT program is a "spinoff" of the Training and Technology Project which has been conducted
(Continued on Page 6)



ON THE WAY—FIT coordinator Bill D. Penry discusses plans for initiating the new Paducah training program with PGDP Superintendent R. A. Winkel.

Every Employee Has Stake in Our Equal Opportunity Program

By CHARLES A. BLAKE
Equal Employment Coordinator

"Father of 14 Studies Mechanics Course in TAT."

Perhaps you remember this headline in the January 22, 1969, issue of the Y-12 Bulletin. "Wilburn Tipton, 50, with 10 children still in school or of pre-school age, has been a farmer who found it necessary to supplement that income with a variety of jobs on the side. Now, Tipton has finished his course in mechanics at TAT and is employed. . . ." This success story is a positive result of affirmative action programming.

I often wonder how many of us have heard of the Nuclear Division's Affirmative Action Plan, or having heard, are aware of its essential features. Each employee and everyone seeking employment with us has a stake in the program. I'm certain that if I mention the words, "equal opportunity" and "compliance," a few more people would chip in with, "Oh, yes. That's the program that says you've got to be black to get a job around here." Such a statement stems only from misinformation, not from knowledge of the facts. This, however, is only one of the arguments which is made whenever we have a discussion of affirmative action.

What is affirmative action? Equal opportunity is a condition; affirmative action is a way of reaching that condition. The words from President Hibbs, which are included on this page, describe it well. (See box).

To implement this program, we must have effective recruiting campaigns for employees at all levels; we must evaluate the candidates by methods which are devoid of cultural bias; we must institute new training and education programs, or utilize existing programs so that employees may develop their potential into useful skills; and, we must make sure that, wherever possible, promotion follows qualification. Perhaps of greatest importance, we must make certain that all employees are aware of the facts of our affirmative action policy and of the support given to the program by management.

Finally, it is important that our policy be well known throughout our surrounding area. Our commitment to affirmative action extends to the areas of civic, recreational and cultural activities, housing, and education. Our employees spend two-thirds of each working day in these communities and the conditions under which they live will affect their performance on the job.

What I've just defined is, of course, the profile of any effective employment program. What is

significant is that these principles must apply to all disadvantaged and minority employment prospects and employees.

Does affirmative action stop with disadvantaged and minority employees? Just how much advantage is there in being disadvantaged. Let's take a look at the record. Our system has been systematically screening such people out of employment programs. In January of 1967, for example, only 3.7 percent of our employees were black, and 64 percent of these employees were laborers and service workers. To remedy this situation, we have been working diligently toward hiring the best black employees as well as the best white employees. Black employees constitute 6 percent of our work force, and 54 percent of these are at levels higher than laborer and service workers. It is a natural consequence of such progress that charges of "reverse discrimination" are made.

I know I cannot convince everyone having this opinion that he is wrong, but here are some answers to questions I get asked most frequently:

"You're hiring nothing but Negroes."

Look at the statistics. In 1968, 85 out of 100 people we hired were white. The following year, 82 out of 100 people hired were white. Given this answer, the questioner may counter with, "Oh, well, I guess I mean that you're hiring nothing but black clerical people." The answer to that is that during 1969, out of 519 weekly people hired, 426 were white. During the last 18 months, 6 percent of our college graduate hires were black. The truth is, we are prone to notice all of the new black faces and miss all the new white faces. Furthermore, some people feel that Training and Technology (which was described in the February 26 issue of the Nuclear Division News) is a black program. It is not—60 percent of the trainees are white. Wilburn Tipton, the man whose success story I described at the beginning of this article—he's white.

"You've lowered your standards so that anybody can get hired."



ORGDP CLERICAL SCHOOL—The Clerical School at the Oak Ridge Gaseous Diffusion Plant was established to make clerical employment available to trainable and well-motivated candidates. A group of participants is shown working on clerical skills.

We have changed our entrance requirements. We have changed them in the direction of being more realistic, in the direction of providing opportunity for those who can do a job adequately for our needs as well as those who should perform excellently. In order for us to progress in the future, this is a necessity.

"But if he doesn't work out, I'm stuck with him for the rest of his working days."

Any good supervisor knows that each of his employees is different. Each has individual wants, likes and dislikes, faults, etc. It is a part of the supervisor's job to know these differences and help wherever possible. I wonder, though, if we realize how much help some of us must unconsciously give our white employees, while resenting the time it takes to give that same much-needed help to our minority employees. It's almost like putting Richmond Flowers at the starting line of a high-hurdle race with a member of a chain gang. Just before the gun, the chain is removed and the starter says, "OK, now you've got equal opportunity—GO!"

We'll make mistakes in judgment—we will hire people who will do poorly and who will not, or cannot improve. We've done it before with white and black employees. But, if the needed help has been offered, if problems are recognized early and these cannot reasonably be resolved, if advice has been requested from responsible sources, and if a completely objective decision has been made—then, the employee must be put into a job he can do, or he must be terminated. What's more, responsible black men want it this way. It is obvious that every time an inferior employee is tolerated in his job, he is jeopardizing the chances for other black men to be hired in that group.

"But the efficiency of my group will suffer."

It would be desirable if all new employees performed from "Day One" at 100 percent efficiency. Do they? Carbide expects and accepts the fact that many employees will require more of a supervisor's time. This is a part of our commitment.

"We're going to promote people just because they're black."

Not true. We have a policy governing promotion and this will be followed. The importance of the EEO program, however, is that employees are counseled, edu-

cated, and trained so that when openings do occur, they can compete successfully for the promotion.

"Ah, but in the event of a layoff, you'll keep your blacks."

In the same way that we have rules governing promotion, we also have rules applying to layoff. They will be followed. An effective personnel policy benefits the worker even in layoff, however. Take the case of the Negro who works all his working years as a laborer. If he is laid off at age 45, he may never work again. If, however, he has received training during his employment, becomes a skilled craftsman at 45, and is then terminated, he will probably be able to go to work the next day at some other location.

Now, to get back to something I asked earlier. Does affirmative action stop with minority and disadvantaged employees?

It is interesting that many companies are realizing that there is a "spin-off" from EEO programs that was not anticipated. It is not difficult to see that every minority employee is an individual, with individual character traits, needs, desires, and, yes, faults. Why has it sometimes been hard to see that all employees should

be viewed in the same light? Too often employees are considered just as cogs in a great machine.

Recognition that the special efforts now being made with minority employees should be made with all employees is, in a way, a return to the management philosophy of George A. Pennock. In 1927, in a classic series of experiments at the Western Electric Company, he proved that employee performance was affected more by the social and human relationships within the employee groups than by anything else. Through the years, the issue has been so clouded by behavioral science consultants, mental hygienists, sensitivity trainers, personnel counselors, communications experts, group dynamicists, attitude testers, nondirective interviewers, sociogram analysts, role-playing directors, executive directors, and efficiency experts, that sometimes one cannot see the forest for the trees.

We must make certain that ours is not a token program. Action is essential. The reports written in 1919, after the Chicago riots, recommended the same corrective action as did the 1968 Kerner Commission Report. Little had been done in 50 years.

A Basic Commitment

We are committed to extending equal opportunity to all our employees and to all those who seek employment with us.

The words "Affirmative" and "Action" are particularly appropriate for describing our program. We are looking positively for things which we can do. We are acting and not just talking.

Our commitment to affirmative action covers the whole scope of employee-employer relations and goes beyond it too. Naturally, we are concerned about our recruiting, hiring and promotion, evaluation and placement, training and education, and internal communication functions. But, we are also concerned about the attitudes and conditions of the communities in which we all live.

We can all be proud of our recent accomplishments in this field. We can be proud, but we must not be complacent. We recognize the fact that some of the changes we have made are small. We must make certain that these increments of change continue to grow in size and in scope.

It is clear. Affirmative action is a part of our job.

R. F. Hibbs
R. F. Hibbs
Nuclear Division President



DISCUSS TAT PROGRAM—The author discusses various aspects of the Training and Technology project with two Y-12 Fabrication Division Foremen. From left are: W. D. Newman, Dr. Blake, and M. L. Sheffler.

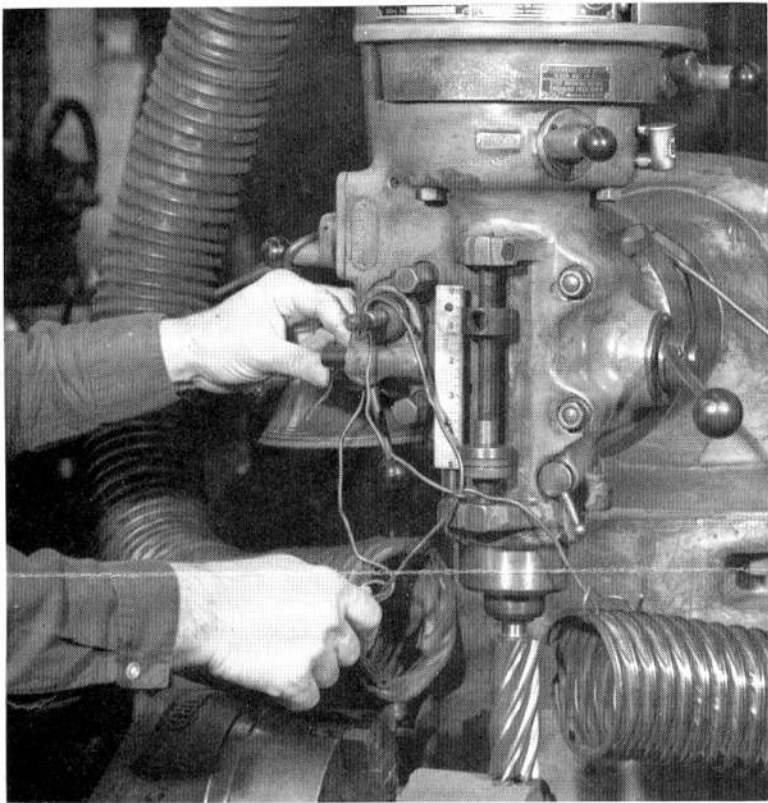
Nozzle to Pick up Machining Dust Is Developed for Safer Shop Procedures

A cost-saving safety development was reported recently in the General Machine Shop, as M. P. Crews, Jr., came up with the idea to improve machining operations in the Graphite Shop.

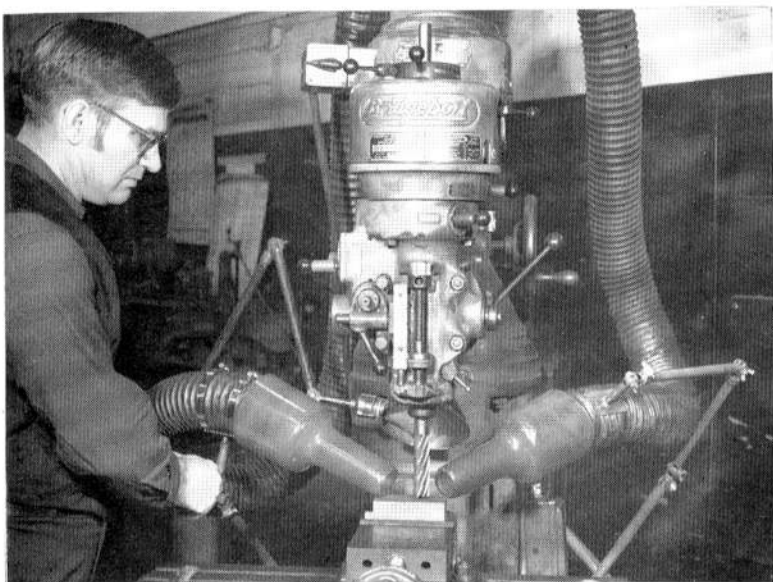
The positioning of the exhaust lines to pick up dust from machining operations had to be flexible because of varying shapes and sizes of parts and the diversity of cutting tools and processes. Up until recently, soft, pliable wire was used to secure these exhaust lines in a position where they

would effectively pick up and remove the dust generated in graphite cutting procedures.

Crews modified the set up, adapting a machine light arm which swivels to hold the exhaust line in position. The unichrome nozzles which are held on to the exhaust line by vacuum force minimize the chance of an end mill or other comparable tool grabbing the metal ribbed exhaust line. This improved method of set-up is much safer. In addition, a considerable savings in set-up time has also been realized.



Before . . .



. . . And After

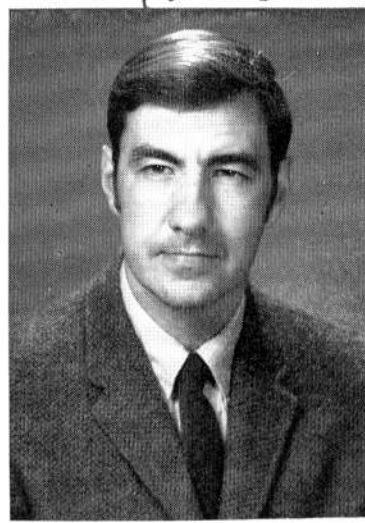
Roy L. Williams Presented Paper On Surface Topography in March

Roy L. Williams, Fabrications Systems Development, presented a technical paper at the Society of Manufacturing Engineers meeting in Chicago, March 10.

In his talk, "Surface Topography Methods," Williams discussed the use of a scanning electron microscope to locate very minute fractures in metals caused by various manufacturing processes and

machining techniques. A scanning electron microscope is a laboratory instrument that permits examination of specimens at high magnifications while retaining an excellent depth of field.

The development work was performed in support of the U. S. Atomic Energy Commission's program to continually evaluate and upgrade machining and manufacturing techniques at Y-12.



Fred W. Jones

Fred Jones Named Department Head

Fred W. Jones, head of the Engineering Fabrication Department in the Fabrication Division, has been named new supervisor of the Fabrication Systems Department, Development Division.

He succeeds Keith G. Kahl, who recently was named to head the Fabrication Division.

Jones, a native of Bessemer, Ala., holds both B.S. and M.S. degrees in mechanical engineering from The University of Tennessee. He joined Y-12 in 1958 and has been involved in both the development and utilization of fabrication systems in the plant.

His wife is the former Sue Tittsworth of Knoxville and they have two children — Susan and Fred Richard. They live on Landoak Lane in the Concord community near Knoxville.

Y-12er is Entrepreneur For Dogwood Mall Show

Y-12er Charley Mills, Alpha Five Processing, is directing "Charley's Gay Hour" on the Mall in Knoxville next Wednesday, April 15.

The show will be presented from 2 until 3 p.m. Wednesday on the Mall, as part of the big Dogwood Festival in Knoxville.

Charley says he has Vickie Butcher, UT co-ed, the George Sharp combo, and a group of folk singers from UT, already committed to appear on the variety hour.

Anyone else, with talent, wishing to perform should get in touch with Charley, extension 3-5191, or at his Knoxville home, 525-9028.

The entire shindig is free, of course, on the Mall. There's to be a big surprise, according to Charley.

Old Tires Never Die

What would you do with 100 million discarded automobile tires? Researchers at the Coal Research Center of the U.S. Bureau of Mines in Pittsburgh are distilling them to recover valuable chemicals as well as gas for heat and power.

Large quantities of chemicals, oil liquids, gas and tar are obtained from scrapped tires by heating them in a closed vessel.

Chemicals recovered from the tires are similar to those produced from coal carbonization, including benzene, toluene, xylene, and naphthas.

Kitchings and Leach Made Assembly Foremen April 1

The Assembly Division announces two promotions, effective April 1 . . . Warren C. Kitchings and Arden D. Leach, both promoted to Assembly foremen.

Kitchings, a native of Oakland, Calif., came here November 9, 1952, after an 11-year hitch in the U. S. Navy. He worked briefly with the International Mineral and Chemical Corp., Bartow, Fla., before coming to K-25 in 1952 (transferring to Y-12 in 1959).

Mrs. Kitchings is the former Ruby Holt, and they live at 106 Oak Lane, Kingston. They have a son Calvin Ashley, working in the Virgin Islands.

Camping out at the beach and in the Smokies occupies a lot of their time.

Arden D. Leach was born in Speedwell, Tenn. and came here May 25, 1954.

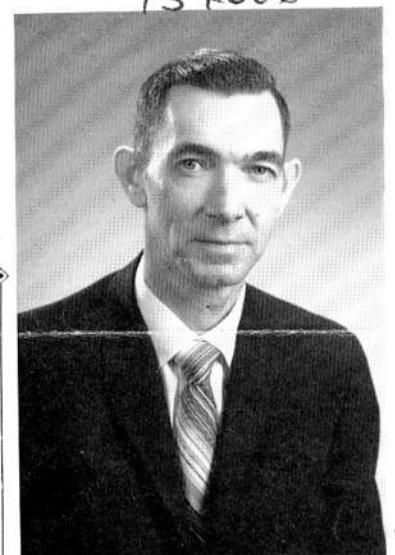
He served in the U. S. Army from 1952 until 1953 and worked with the La Follette Shirt Company three years before that.

The Leaches live at Route 4, La Follette. There are four children . . . Dennis and Vickie in LaFollette High School and Marvin and Brian in junior high.

Leach says he likes to fish in between taxiing 'young'uns' back and forth from little league games.



Warren C. Kitchings



Arden D. Leach



Ride wanted from East Village area, Oak Ridge, to West or Central Portal, straight day. Nancy Ellis, plant phone 3-7392, home phone Oak Ridge 483-1736.

Will join car pool from 504 Woodland Drive, Clinton, to West or Central Portal, straight day. C. W. Anderson, plant phone 3-7392, home phone Clinton 457-2687.

Ride wanted from Cumberland Estates area, Knoxville, to North Portal, straight day. Lennis Barden, plant phone 3-7237, home phone Knoxville 588-8378.

One car pool member wanted from Norwood section, Knoxville, to North or Central Portal, straight day. E. C. Keith, plant phone 3-5698, home phone Knoxville 689-2229.

Riders wanted from Northeast Knoxville, Fountain City area, or Norwood section, all portals, straight day. F. E. Clevenger, plant phone 3-3981, home phone Knoxville 522-7393.

Ride wanted from North Knoxville area, Deery Street, to North Portal, straight day. H. W. Anderson Jr., plant phone 3-5583, home phone Knoxville 523-2005.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
96 Days Or
3,295,000 Man-Hours
(Unofficial Estimate)
Through April 5
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY



Along with the rites of Spring, several Y-12ers mark important dates with Union Carbide Corporation. Congratulations.

25 YEARS

Rosie L. Martin, Building Services Department, April 8.

Spears P. Vavalides, Beta Four Forming, April 9.

Charles D. Maberry, Product Engineering, April 10.

William H. Rice, Civil and Architectural Engineering, April 12.

20 YEARS

George W. Brewer, Special Production Scheduling and Coordinating, April 13.

15 YEARS

Elmer D. Lay, Utilities Administration, April 9.

Willim W. Randles, Materials Engineering Department, April 10.

Elmer Sharp, Buildings, Grounds and Maintenance Shops, April 15.

10 YEARS

Charles E. Costner, Numerical Control Engineering, April 11.

WOMEN IN CHEMISTRY

Within the chemical industry 18 of every 100 employees are women. This figure is well below the national average.

Y-12 Papers Read At Local Meeting



Miss Duncan Coulter



Ferree Henry

Four Y-12ers presented papers at the American Society for Non-destructive Testing Workshop. The workshop was held in Oak Ridge March 24, 25 and 31.

Rebecca T. Duncan, gave a paper on "Computerization of Radiation Beam Welds." D. V. Ferree's paper was on "In-Process Ultrasonic Measurement." J. E. Coulter spoke on "Eddy-Current Testing of Electron Beam Welds," and J. J. Henry on "Capacitance Type Noncontact Gage for Dimensional Inspection."

The technology described in these reports was developed in Y-12 in support of various U. S. Atomic Energy Commission programs.

The workshop was hosted by the Oak Ridge Chapter of ASNT and was held at the Oak Ridge High School. Y-12er L. G. Losh is chapter chairman.

Gatlinburg Golf Contest Set for Saturday, April 25

The Recreation Department is accepting applications for tee-off times for the Gatlinburg tournament, the first golf competition of the new season. The application blank, found on this page, will be run only one time . . . so clip it and submit it immediately to the Recreation Department, 9711-5.

Those with carts must tee off first, then the walkers. Application deadline is Wednesday, April 22. Drawings will be made the next morning and team captains will be notified by telephone.

Recreation



Sunday, April 12
SKEET TOURNAMENT: 1 p.m. Oak Ridge Sportsmen's Association.

Monday, April 13
BOWLING: 5:45 p.m. C League Championship Roll-Off, Ark Lanes.

Tuesday, April 14
April 21
BOWLING: Starlite League, 8:30 p.m. Starlite Lanes, Knoxville.

PHYSICAL FITNESS: (For Men) 7-9 p.m. Oak Ridge High School Gymnasium.

Wednesday, April 22
GOLF: Deadline for entering Gatlinburg Tournament (April 26) 4:30 p.m.

Thursday, April 16
April 23
BOWLING: Classic League, 5:45 p.m. Ark Lanes. (Roll-Off on April 23).

White Water-Canoe Club Set Meeting for April 21

The Carbide Canoe Club has set its regular monthly meeting with the East Tennessee White Water Club Tuesday, April 21, at 7:30 p.m. in the Fellowship Hall of First United Presbyterian Church. A short business meeting will be followed by a program on East Tennessee water and wildlife. Professor Ralph Dimmick, Wildlife Biologist in the UT Forestry Department, will present and narrate a slide program. Also tentatively scheduled is a display of slides taken along the Little Tennessee River by Nick Fieldes. An informal social hour will conclude the evening.

Membership in the CCC is open to families of all Union Carbide employees. Anyone interested may attend the April meeting and hear plans for the spring and summer.

Four Golf Links Offer League Play For Y-12

At least four golf leagues are planned for Y-12ers for play on local greens.

They are as follows:

South Hills, Oak Ridge.

Melton Hill, Clinton.

Southwest Point, Kingston.

Whittle Springs, Knoxville.

Teams will consist of two men. Call Recreation, 3-7109 and give them your team members, phone numbers and league preference.

Tee-Off Time Application For Gatlinburg Golf Tournament

Saturday, April 25

Foursome

_____	Leader

Leader's office phone _____	
Home phone _____	
Tee-off Time Preferred _____	

Fill out completely and return to the Recreation Office, Building 9704-2. Deadline for entering is 4:30 p.m. Wednesday, April 22. Tee-off times will be drawn the next day, Thursday, April 23 at 8:30 a.m.

GOLF CARTS Yes ☐ No ☐



KAREN THOMPSON, BENEFIT PLANS, shows to good advantage the door prizes to be awarded at the big Spring dance for Y-12ers, set Friday, May 8, at the American Legion Club, Oak Ridge. Alan Atkins and his smoooooooooth orchestra will be back again for the gala affair. Dancing will be from 9 until 1, naturally.

Alley Cats and Goofers Vie for Mixed Alley Top

The Alley Cats finished the Mixed Bowling League with a blaze of glory, downing the Twisters for three points, after defeating the Spare Parts for three and one-half points the week before. They finished 10 games out in front of their nearest contender, and face the Goofers this week in a roll-off for league championship.

The league met last week and elected Bill Hackett president; Jim Young, vice president; and Virginia Newby, secretary-treasurer. They assume play next fall the Wednesday after Labor Day.

Final standings follow:

Team	W	L
Alley Cats	44½	11½
Hits & Misses	33½	22½
Twisters	29½	26½
Goofers	27½	28½
Spare Parts	25½	30½
Rollers	23	33
Mustangs	21½	34½
Roses 'N' Thorns	19	37

Has Beens 'Almost There' In Classic Alley Race

The Has Beens came closer to tying down the final thrusts of the Classic Bowling League last week with a four point win over the Rebels. But the Bumpers stay right in there with a similar win over the Splinters.

Ken Valentine, Playboys, played around with a 236 single game, 264 scratch single . . . and a 675 handicap series last week. Charlie Baxter, Screwballs, rolled a 243 scratch, 264 handicap single the previous week.

Team	W	L
Has Beens	40½	11½
Bumpers	38	14
Rebels	29	23
Rippers	29	23
Swingsters	28	24
Eightballs	28	24
Screwballs	27½	24½
Splinters	27	25
Playboys	27	25
Tigers	26	26
All Stars	25	27
Markers	24	28
Cubs	19½	32½
Pinbusters	18	34
Smelters	16½	35½
Eagles	13	39

GIRL SOFTBALL LEAGUE?

Are there enough girls in the plant interested in forming a softball league? It takes 10 girls per team . . . so if you think you can scrape up enough to play, call Recreation, extension 3-7109. They'll help you get organized.

Computes, GBUs Lead Big Basketball League

The Bombers played a close one in Basketball last week holding the Computes' feet to the fire. Larry Finch managed only six points through the hoop, but everybody else was scoring. Ron Barry poured in 19 points, Jim Treadwell 15. Final outcome — Computes: 67, Bombers: 50.

The Computes defeated the Butter Balls the previous week by exactly the same score 67 to 50!

The Butter Balls gave them a good run for their money, but ran out in the last quarter.

The GBU's from Y-12 still hang on to their second place in the league with only one loss. Last week they won two forfeits, and the previous week they easily defeated the Beta 2 Miners 70 to 48.

League standings follow:

Team	W	L
Computes, ORNL	18	0
GBU's, Y-12	18	1
CC 69ers, K-25	16	2
Bombers, ORNL	15	3
Beta 2 Miners	14	4
Nads, ORNL	14	5
Butterballs, ORNL	12	6
Isotopes, ORNL	12	7
Rolling Bones, ORNL	10	9
K-25 Trojans	9	9
Spoilers, ORNL	8	10
Aggressors, ORNL	6	11
Meat Loafs, ORNL	6	12
Buccaneers, Y-12	6	12
Road Runners, ORNL	6	12
Hawks, Y-12	5	12
Rats, Y-12	5	13
Quarks, Y-12	5	14
Mod Squad, Y-12	5	14
Development All Stars, Y-12	1	18
Ail Stars, ORNL	1	18

Woodpeckers Keep Lead In Starlite Kegler Race

The Woodpeckers command a scant two and one-half point lead in the Starlite league . . . after a big win over the Splinters, and a two-game win over the Jaguars last week.

Coy Harrell, Hi Jackers, recently rolled a 209 single game . . . a series of 566 scratch, 626 handicap. Steve Babb, Thunderbirds, last week put a high 216 scratch, 246 handicap game down.

Team	W	L
Woodpeckers	52	20
Hi Jackers	49½	22½
Has Beens	42	30
Splitters	37½	34½
Thunderbirds	35	37
Dynapaths	33	39
Wildcats	27	45
Jaguars	12	60

Why hurry, if the minute you save is your last?

Rollmasters and Rounders Vie for C Alley Crown

The big Rollmasters rolled their way atop the C Bowling League's last half last week as the 12-team league settled into its position roll-off. They defeated the Sunflowers two games, and took total pins for a total of three points.

Jim Bartholomew, HiLifers, posted a 209 scratch, 240 handicap game for individual honors; while Charlie Anderson, Go Go Gophers, gained a 572 scratch, 656 handicap series.

The previous week Tom Hillard, Rounders, rolled a 234, 253 single. The Rounders won the season's first half and face the Rollmasters next week in the championship roll-off.

Team	W	L
Rollmasters	41	19
Sunflowers	37½	22½
Big Five	36½	23½
Instrument Engineers	33	27
Rounders	31½	28½
HiLifers	31	29
Badgers	29½	30½
Anodes	29	31
Fireballs	26½	33½
Royal Flush	26½	33½
Parbusters	20	40
Go Go Gophers	18	42

Coin Show to be Featured In Dogwood Arts Festival

Coin collectors will be interested in the big Coin Show in the Dogwood Arts Festival this week in Knoxville. Sponsored by the Kerbel Shrine Temple, the show will be held at the Temple, 315 Mimosa Avenue, April 10, 11 and 12.

There will be 40 tables set up, operated by reputable and select coin dealers from the Southeast to buy, sell and exchange. Area collectors will also have displays.

Additional information may be obtained from Paul L. Robertson, Knoxville telephone 588-2057.

FUNGUS FREE FIELDS

An adequate food supply depends on protecting garden vegetables against their natural enemies. Among them are such things as downy mildew, anthracnose, leaf spots, scab, seedpiece decay, blight, septoria, and the like. Special chemical fungicides — all approved by the Food and Drug Administration — when properly used, control these destroyers without harm to animals or man.

THE CARBIDE COURIER

Thursday, April 9, 1970

Page 3



Mary Louise Henderson

Returns to ORGDP From Alliance Job

After having been gone for almost a year, Mary Louise Henderson has now returned to her job as a clerk in the Payroll Department. Her name was Mary Louise Porter when she left us on April 18, 1969, however she was married last November 22 to F. J. Henderson, who is now in the U. S. Army stationed in Korea.

Mary Louise left us to become secretary in the newly formed National Alliance for Business Men in Knoxville. The Alliance, sponsored by the Knoxville Chamber of Commerce, was formed to encourage private business firms to hire and train disadvantaged and unemployed individuals of all ages.

"By and large, the program has been very successful," Mrs. Henderson said. She cited one example where brief resumes of 20 different people were publicized for possible summer employment. All 20 were placed and a large majority proved to be satisfactory employees. Some were kept on as permanent employees and are still working, even though they were originally hired just for the summer.

Mary Louise said that the most interesting part of her job with the Alliance for Business Men was meeting and dealing with all types of people. She also stated that she was glad to be back here with us at Carbide.

lyn Marshall of Lenoir City. The Benders live at Eaton Crossroads with their three children; Lisa, 12, Michael, 9, and Joanna, 5.

Joe's outside interests include hunting, fishing, golfing, reading, working with Boy Scouts, and he is a member of the Marine Reserve.

It takes longer to report an accident than prevent one.

Joe Bender to Speak To Accountant Group

Joseph M. Bender, Department Superintendent of Staff Development and Compensation, Industrial Relations Division, will speak to Knoxville Chapter of the National Association of Accountants at Deane Hill Country Club on April 21. His speech is to be entitled "My Business Is People." Bender is a frequent public speaker who welcomes the opportunity to speak anytime on a patriotic subject. Recent talks have been given to the U. S. Federal Court at the installation of new citizens and at the East Tennessee Regional Meeting of the Daughters of the American Revolution.

Bender was born and raised in Milford, New Jersey. He has a B.S. degree in History and English from Maryville College, and a year of graduate school at U.T. He has been here more than three years, transferring to us from ORNL. Prior to coming with Carbide he served in the U.S. Marine Corps.

Mrs. Bender is the former Caro-

Estes, Griffin, Orrin and Phillips Promoted

Four employees at the Oak Ridge Gaseous Diffusion Plant have been promoted to supervisory positions. They are Kerry Estes, Albert Griffin, Robert Orrin, Jr., and Robert Phillips.

K. D. Estes

Estes has been promoted to process foreman in the Operations Division. He has been at ORGDP since 1957, and prior to transferring to the Operations Division as a supervisory trainee, had worked as a technician in the pilot plants and the compressor and stage equipment development department of the Technical Division.

A native of Thomasville, Ga., he was graduated from Southern Technical Institute at Marietta, Ga. He and his wife, the former Shirley Anne Conner of Clinton, Tenn., live at West Ridgecrest Drive in Kingston. They have two sons.

A. F. Griffin

Griffin was promoted to maintenance foreman in the Maintenance Division. He has been employed at ORGDP since 1945, first as an instrument mechanic and since October, 1969, has been working as a planner and estimator.

A native of Limestone County, Ala., he was graduated from Elkmont (Ala.) High School. He also studied at Coyne Radio and Electronics School in Chicago, Ill. He is married to the former Ester Carter of Rockwood and they have four children.

R. C. Orrin, Jr.

Orrin was promoted from management trainee to process foreman in the Operations Division. He has been employed at ORGDP since 1968.

A native of Lenoir City, he was graduated from The University of Tennessee. Mrs. Orrin in the for-



Kerry D. Estes



Albert F. Griffin



Robert C. Orrin, Jr.



Robert L. Phillips

mer Nancy Payne of Knoxville. They and their two children live at Route 4, Lenoir City.

R. L. Phillips

Phillips was promoted from a planner and estimator to maintenance foreman in the Fabrication and Maintenance Division. He started work at ORGDP as a maintenance mechanic in 1952.

Before coming with Union Carbide he worked for the Pure Oil Company at Beaumont, Tex.

Phillips is a native of Blacksburg, W. Va., and attended public schools in Beckley, W. Va. He is married to the former Jean Quinton and they have four daughters. They live at Route 1, Eaton Crossroads, Lenoir City.



CREDIT UNION BUILDING GROUND BREAKING CEREMONIES . . . K-25 Superintendent R. G. Jordan, along with E. C. Clevenger and A. P. Dunlap, presidents of the hourly employees' unions, gathered with a group of K-25 Credit Union officials on Monday, March 16 to observe V. O. Maggart, Jr., President of the Credit Union, turn the first shovel of dirt preparing for the construction of the Credit Union's new quarters to be located in the Grove Center area.

K-25er's Son is Honored At Pratt-Whitney Party

Mary Kennedy Johnson, secretary in Shift Operations and Security, recently received news that her son, Earl Kennedy, was honored by Pratt and Whitney Aircraft Corporation at West Palm Beach, Florida. Young Kennedy was one of five engineers in his area to be invited to a "big bash" given by the president of Pratt and Whitney celebrating their having received a \$448 million contract to develop and produce 90 supersonic fighter engines.

The top-secret engines will be used to power the United States' fastest and most maneuverable

fighters, the Air Forces' F15 and the Navy's F14B. This is the biggest contract in the 14 year history of Pratt and Whitney in Palm Beach County.



Ride wanted or will join a carpool from Woodland area to Portal 4, 7:45 to 4:15 shift. K. G. Shugarts, 3-3031, home 483-6218.

Ride wanted from 200 block, Outer Drive to Portal 4, day shift. T. L. Hatcher, 3-3135, home 483-0314.

Ride wanted or will join carpool from Gulf Park Subdivision (West Knoxville) to Portal 5, 8:00 to 4:30. Jim Rogers, 3-3341, home 588-0305.

Ride wanted from 1709 Worth Street, Knoxville to administration area, 7:45 to 4:15. Flora Lewis, 3-3028, home 525-3607.

SAFETY SCOREBOARD

OUR PLANT
Has Operated
3,118,000 Safe Hours
Through April 2

Since last disabling injury on August 19

The Referee's Job 'No Bed of Roses'

In the excitement of a hotly contested football game the average spectator in the grandstand is only vaguely aware of five men in striped shirts on the field who blow whistles and make decisions on violations with which the spectator may or may not agree. Two officials show up again at basketball games, more in evidence there because the spectators are closer to the action. The average spectator's comments about the officials may range from a mild doubt about their ability to see—to an open question about their ancestry, on the part of the more rabid followers of the losing team.

To find out what manner of men officials are, we turned to Howard Sullivan of the ORGDP Laboratory Division, Chemical Analysis Department, Research Analysis Section. "Sully" started officiating basketball for the Montgomery, Alabama, Y.M.C.A. while a student in college. Shortly after coming to Oak Ridge in 1952, he became a member of both the Oak Ridge Football Officials Association and the Oak Ridge Basketball Officials Association and has been a member of both groups since that time. He was Chairman of the Basketball group from 1962 to 1968, at which time he was selected commissioner of the group, an office he still holds. The function of the commissioner is to assign officials to scheduled games.

Excellent Vision
One of the first things Howard would like to do is to assure all concerned that the officials eyes are good. However, he says the officials, in the case of a basketball game, have only four eyes to watch ten players on the floor plus two coaches and other assorted players on the bench and they might possibly miss a few things that happen.

The insignia on the striped shirt indicates that the official is registered with the Tennessee Secondary Schools Athletic Association, a group composed of all the secondary schools off the state. The purpose of TSSAA is to promote and regulate sports in these schools.

As to how one becomes an official, Sullivan cites the case of a young man wanting to join the Basketball Officials Group. After due deliberation, the local group recommends that he be accepted for membership as an official. Upon acceptance by TSSAA he begins a long period of training, averaging, according to Howard, three years. The young official progresses from officiating junior recreation league games to church league and Boys' Club games, and finally to plant league, junior high and high school "B" games. During this period of apprenticeship he works with more experienced officials, is under constant observation and supervision, and is given constructive criticism. Finally, there comes a time when the experienced officials agree that they would be willing to accept the trainee as the second official in a high school game and he becomes certified to officiate TSSAA sanctioned basketball games. Sullivan feels that the Oak Ridge Officials Association has the best system of training young officials to be found anywhere.

Local High Schools
As basketball commissioner, Howard's task is to schedule officials for the home games of



Howard Sullivan

twenty-five high schools, six junior high schools, the Oak Ridge City Recreation program, the Carbide Plant League, and a recreation league in Clinton. This represents assigning over forty officials to a total of more than one hundred basketball games per week during the regular season.

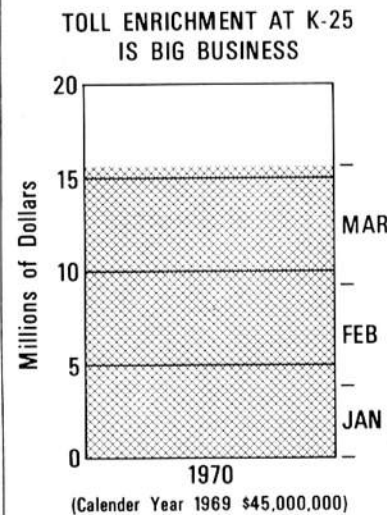
Howard gets philosophical about the relationship between spectators and officials. He says, "The right to criticize officials is a right specifically reserved for the paying customer." He expects that the fans will continue to question the decisions of the officials, and the officials will continue to call them as they see them.

At ORGDP Howard does spectrographic and atomic absorption analysis and methods development. When not involved with officiating, watching ball games, or playing golf, he may be found at home, 123 Manchester Road, Oak Ridge. He is married to the former Ella Mae Hatfield, a former employee of the ORGDP Laboratory Division. They have three children, Ann, a student at Oak Ridge High School, then twin sons, Joe and Mike, students at Jefferson Junior High School. All three children are active in sports.

Complete Golf Schedule Is Given for K-25ers

The schedule in the last issue of the Courier for the K-25 golf tournaments for 1970 was incorrect for the months of July and August. We repeat the whole schedule for the golfers who want to clip it out and save for future reference.

1970 TOURNAMENT SCHEDULE
Clip and Save
May 2—Southwest Point, Kingston
June 6—Gatlinburg
June 27—Wallace Hills, Maryville
July 25—Melton Hill, Clinton
August 29—Whittle Springs, Knoxville
Tee-off times for the first tournament may be obtained from the Recreation Office at 7:45 a.m., Monday, April 27.



Double Xers Still Hold Bowling Lead

By Mal Strickland

March 17 — In the lowest scoring session of the season, a very few "good" scores were racked up, Claude Jones, with a 553 scratch series, and Mal Strickland, with a 551 scratch series, had the top scratch series shot this session.

Charles Hale, with a 222 scratch game and 242 handicap, took honors in the game category. Walt Brown shot a 616 handicap series (532 series) to take honors in handicap series.

Paul Clabough with a 535 scratch series, and Millard Gibson, with a 214 scratch game (235 handicap) were "close" in these categories.

March 24 — Mal Strickland rolled a 223 scratch game (235 handicap) and a 578 scratch series to take honors in above categories. Ted McKenzie took the honors in handicap series as he wound up with a 639 set.

Ed Felte, with a 558 scratch series, and Stan Fraley with a 548 scratch series (635 handicap) were close behind in these categories. Martin Ginsburg had a good 211 scratch game (232 handicap).

Standings			
Double X	28	Full House	18
Possibles	26	All Stars	18
Atoms	22	City Slickers	17
Late Comers	18	AECOP	17

Car Accident Takes Life of C. V. Slaven

Charlie V. Slaven, 58, Stores Clerk in the Materials Management Department, Finance and Materials Division was killed Saturday, March 28, in a two-car head-on collision on U.S. 27, eight miles south of Wartburg. He was the only occupant in his car; four people in the other car are reported in satisfactory condition.

Slaven had been employed here since February 5, 1945. He was born and reared in Scott County, Tennessee but had lived in Morgan County for more than 20 years.

His immediate survivors include five children, Jack and Roger Slaven, Harriman, Robert Slaven, Bowling Green, Ky.; two daughters, Mrs. Ronald Bewyea, Gaithersburg, Md., and Miss Jone Slaven, Harriman.

Elrod Is Named President Of Clinton Softball League

Olin D. Elrod of ORGDP's General Accounting and Finance Division is serving a second year as president of the Clinton Girls' Softball League.

Elrod is one of several Carbide employees who have served as coaches in the league. Ralph Pearson, of the Training and Technology Program at Y-12, was one of the league founders.

The league is divided into two subgroups, according to Elrod. There are eight teams for girls between ages 10 and 14, and six teams for girls between 15 and 18. In all, about 300 girls play in the league, which is open to girls from Clinton and the surrounding area.

Team tryouts are scheduled for next month, and the season will extend from June to July. Persons interested in further information about the league and how girls can join should call Elrod at 3-9671.

Chief Timekeeper Is Stroke Victim

Jerome Wesley Glass, 51, chief timekeeper here at K-25, died at Fort Sanders Hospital on Friday, March 20. He suffered an apparent stroke while bowling the preceding Tuesday evening.

Glass was first employed in 1943 by Tennessee Eastman at Y-12. He transferred to K-25 in 1948. Prior to his employment here in Oak Ridge he had served in the U. S. Army in World War II. He was born and reared in Jonesville, Va.

Immediate survivors include his wife, the former Elsie Mathews, at their home at 3015 Cherrywood Road in Knoxville and two daughters; Miss Linda Glass, who has just completed college and teaches school at Brickey Elementary in Knox County; and Mrs. Ralph E. (Rita) Brown, who is attending The University of Tennessee while her husband is on a tour of duty in Vietnam.

H.J. Culbert Named To AIC Fellowship



H. J. Culbert

Henry John Culbert, staff member in the Operations Division of the Oak Ridge Gaseous Diffusion Plant, has been elected a Fellow of The American Institute of Chemists, it was announced by Emerson Venable, President.

The AIC has more than 7,000 members in 26 chapters throughout the United States. It is the only chemically-oriented American organization whose principal purpose is to develop the professional and economic status of chemists and chemical engineers. Membership is limited to those whose principal education is in these fields.

Mr. Culbert received his B.S. degree in chemistry in 1941 from the University of Alabama. He has been associated with the Nuclear Division of Union Carbide since March, 1944.

Mr. Culbert's wife, Eleanor, will receive her M.S. degree in science education from The University of Tennessee in August of this year. The Culberts have three children — two daughters and one son. Their daughter, Louise, received a degree in education from the University of Alabama in 1969; their other daughter, Patricia, is now a senior at the University of Alabama where she is majoring in math. Hank, their son, is a junior at Oak Ridge High School.

Be alert, don't get hurt.



Mrs. H. H. Lunn

Lab Notes

Eva Lunn, wife of Harold Lunn, Laboratory Division, is Grand Organist for the Order of the Eastern Star in the State of Tennessee. She plays classical, religious, and popular music on both the organ and the piano, and during the past year she has traveled as Grand Organist to all sections of the state.

The Order of the Eastern Star is the world's largest fraternal organization in which men as well as women can attain membership. As one of its many projects, this organization has in the last 15 years given over four million dollars in scholarships to worthy persons requesting assistance to further their Christian education.

Eva is a graduate of The University of Tennessee and has been a teacher in the Clinton City Elementary School for 17 years. She likewise taught in the Henry County and Cumberland County school systems. Although her main hobby interests naturally lie in the area of music and music composing, she has also found time to participate in the fields of poetry and art.

J. L. Lowery of the Chemical Analysis Department is the host of an International Exchange (High School) Student from Chile for six weeks. The student, Miss Erika Medina, is probably teaching the family as much about South American customs as she is learning about those of the United States. Besides learning some basic Spanish, Keith reports that among the things he has learned about Erika and Chile: (1) onions are used a lot in cooking, (2) Erika likes peanut butter, (3) electrical and mechanical items from the United States cost two to three times as much and (4) a Chevrolet Impala with air conditioning sells for over \$10,000. By the end of this six-week adventure, perhaps Keith and his family will be ready for a trip to Chile.

Women's Bowling

Mary Foley took all of the Bowler-of-the-Week honors in the March 24 session of bowling with single game scores of a 242-268 and series scores of 562-640. Durn good bowling!

Eileen Walbrecht was the March 17 Bowler-of-the-Week with a series handicap score of 629. Oleta Carden had the best scratch single game with 189, Jennice Gardner had the best handicap game score with a 223 and Mary Foley rolled the highest scratch series, a 503.

Standings			
Pay Offs	32	Spotters	21
Uptowners	29	Bowlettes	21
Pin-Ups	28	Hot Shots	20
Wood Bees	27	Purchasettes	14

Angina Pectoris -- Still a Mystery

By T. A. LINCOLN, M.D.

In 1768, William Heberden, the famous English physician, first described angina pectoris, a special form of chest pain. He didn't know what caused it. One hundred fifty years later most physicians assumed they understood the cause but now they are not so sure.

Heberden wrote, "But there is a disorder of the breast marked with strong and peculiar symptoms, considerable for the kind of danger belonging to it, and not extremely rare,

which deserves to be mentioned more at length. The seat of it, and sense of strangling, and anxiety with which it is attended, may not improperly be called angina pectoris . . .

"They who are afflicted with it, are seized while they are walking (more especially if it be uphill, and soon after eating) with a painful and most disagreeable sensation in the breast, which seems as if it would extinguish life, if it were to increase or continue; but the moment they stand still, all this uneasiness vanishes."



Dr. Lincoln

Heberden's original description has not been improved upon even though thousands of articles and books have been written describing the causes and treatment of this condition. Although Heberden lived over 100 years before anyone thought much about psychosomatic medicine, he was well aware of the association of angina with emotional upsets. A man who had angina had remarked to him that his "life was in the hands of any rascal who chose to worry him."

The teaching of the last 50 years is that angina pectoris is due to a lack of blood supply to the heart muscle. The heart "cries" out in pain when its muscle fibers do not get enough oxygen.

Angina was thought simply to be a problem of supply and demand. Any condition which reduced the supply below a critical level caused pain. Coronary atherosclerosis, the fatty deposits of which obstructed the flow of blood in the coronary arteries, was the principal cause. Exertion was the main cause of an increased demand for oxygen.

Supply-Demand Theory

The supply and demand theory has many other important considerations. For example, emotional stress, rapid heart beat, acute infection, a recent heavy meal, high environmental temperature, high blood pressure or an overactive thyroid gland all increase the demand of the heart muscle for oxygen.

The supply of blood can also be reduced by shock, hemorrhage, heart failure or disturbances in heart rhythm. In an anemia, enough blood may be circulated but there is insufficient oxygen in it.

It is now clear that typical angina can occur at rest without any obvious cause. The same person who has pain first thing in the morning may be able to rapidly climb several flights of stairs the same afternoon. Some patients who have attacks during exertion can continue what they are doing and the pain will go away. Some people will have attacks while walking outdoors but can perform even more exertion indoors without pain. Some may have pain after a small lunch but can stuff themselves at a holiday meal without any pain. A few will have pain at rest, especially at night, but little or none during normal activities during the day.

Confusing Picture

To even confuse the picture more, a number of cases of patients with typical angina have been studied who had completely normal coronary angiograms, the X-ray dye study of the coronary circulation. It is claimed that selective coronary angiography will depict coronary vessels as small as 100 microns (.004 inch) in diameter. This claim seems immodest, but many feel that a normal angiogram excludes the presence of serious coronary atherosclerosis.

Several cases have been studied thoroughly for other possible defects in the delivery system for oxygen but none have been found. Here seems to be a case of someone who has symptoms of heart disease but no heart disease can be found.

Although most cases of angina pectoris are due to narrowing of the coronary arteries due to atherosclerosis, there is

Christian Athletes Name Directors

At a recent meeting, some 35 citizens of Oak Ridge were elected to the board of directors for the Fellowship of Christian Athletes (FCA).

Elected were individuals from all walks of life including businessmen, craftsmen, lawyers, scientists, doctors, coaches and ministers.

Several Nuclear Division personnel were named to the board. From the Oak Ridge Gaseous Diffusion Plant were Steve Cates, Bill McClain, John McKeener, Ron Taylor and Tom Wicker. From Y-12 were Bob Cantrell, Jerry Davis, Bill Hicks, Bill Inklebarger and Chalmers Wilson. From Oak Ridge National Laboratory were Jim Burris, Tom Hamrick, Morris Osborne and Jim Slice.

The purpose of the board is to provide support to the "Huddle" groups already organized by Coach Emory Hale and his staff at the Oak Ridge High School. Coach Hale is very optimistic about the possibility of future growth as more and more individuals in the community provide the support required for an active and growing FCA.

The FCA is an interdenominational, inter-racial fellowship dedicated to increasing Christian thinking and action among athletes and other youth, thus bolstering the already existing church.

The "Huddle" groups provide the opportunity and create the atmosphere for athletes to band together around at least two points of strong common interest: Athletics and Christianity.

The FCA programs are designed specifically to encourage active participation by young people in the religious activities of their choosing.

Anyone wishing more information about the program, or interested in helping to encourage the program can contact any of the above fellow employees.

Annual Report of AEC For '69 Now Available

Copies of the Atomic Energy Commission's 1969 annual report to Congress are now available to the public.

The 332-page report, entitled "Major Activities in the Atomic Energy Program, January-December 1969," may be purchased from the Superintendents of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for \$1.75.

no justification in judging the seriousness of the disease by the amount of pain. Some patients with severe recurring angina live to die of "old age." Other patients with severe heart disease have no pain. In many cases the basic cause of the pain cannot be determined.

It is attractive to speculate that the problem is due to muscle spasm in the arteries. Unfortunately, this cannot be proven. Several cases have been reported who had markedly abnormal electrocardiograms during an attack even though the angiograms were completely normal. It is a little hard to explain the abnormal ECG which indicated changes confined to one part of the heart on a spasm basis. Why the spasm in just one artery?

Anyone who thinks he knows all the answers to any human disease could learn from the story of angina. The human body gives up its secrets with extreme reluctance.

Linde Develops New Pollution Control Utilizing Oxygen in Treatment Plants

The cost to build and operate municipal sewage treatment plants needed to combat water pollution can be reduced by up to 50 percent, according to F. Perry Wilson, president of Union Carbide Corporation. The unprecedented savings are the result of a new pollution control process for treating sewage with oxygen in secondary waste treatment plants.

"This new system, which was developed by our Linde Division," Wilson stated, "provides a better secondary waste treatment process than was possible previously, using about one quarter the space needed before, at operating costs approaching half those currently experienced. In effect, a waste treatment plant that previously would have cost \$50 million can now be built for about \$35 million and operated for about \$1 million less per year."

The system — known as the Unox waste treatment process — uses oxygen rather than air in treating sewage in secondary waste treatment plants utilizing the activated sludge process. The standard practice currently used at such plants is to bubble large quantities of air through the wastewater to provide the required amount of oxygen for treatment prior to discharge to a river, lake, or ocean.

The economics of the Unox process, which were demonstrated by nearly one year of full-scale operation at the municipal waste treatment plant at Batavia, N. Y., offer cost reductions compared to the conventional air process of from 30 percent to about 50 percent or more. Both capital and operating costs are significantly less. Equally important, the system provides improved water pollution control when compared to air systems.

Current Technology

A common method of disposing of pollutants in wastewaters is the activated sludge process, which is used at Batavia. In this process, large quantities of air are bubbled through wastewaters that contain dissolved organic substances in open aeration tanks. Oxygen is required by bacteria and other types of microorganisms present in the system to live, grow, and multiply in order to consume the dissolved organic "food," or pollutants in the waste. After several hours in a large holding tank, the water is separated from the sludge of bacteria and discharged from the system. Most of the activated sludge is returned to the treatment process, while the remainder is disposed of by one of several accepted methods such as sanitary landfill or burning.

The Union Carbide system uses covered aeration tanks which are sub-divided by baffles to allow multistage operation. Oxygen gas and the wastewater are introduced into the first stage; oxygen is efficiently and thoroughly mixed with the wastewater and flows freely from stage to stage.

Several dramatic improvements occur with the oxygen system compared with air aeration. At Batavia, for example, only one quarter of the existing aeration tankage, sized for operation with air, was needed to treat a raw sewage volume in excess of the original plant design flow. Dissolved oxygen levels in the wastewater are six to eight times higher; the aeration process itself is speeded up almost four-fold; there is a four-fold improvement in mixed liquor-solids concentra-

tions; a marked improvement is realized in the handling characteristics of the sludge itself; and partial data indicates a significant reduction in the amount of activated sludge which must be disposed. Of critical importance, the effluent shows a Biochemical Oxygen Demand removal level of 93 percent — a meaningful improvement over normal air aeration performance.

Specific Cost Savings

The improvements which result in cost savings include a reduction in the amount and size of aeration tankage; no need for extensive air blowers and electrical switchgear; about a 50 percent reduction in electrical power requirements; less sludge handling costs; and greater process control.

The Pack Takes Laurels In Volleyball Tourney

Volleyballers in the Nuclear Division played a single elimination tournament recently and crowned a new champion . . . an ORNL team called The Pack.

Initial action began with the Set Ups putting the ORNL Old Men out 17-15 and 15-9. The Y-12 Old Men eliminated the Ecobums 15-10 and 15-13.

The K-25 Hawks clipped the Boomerangs 15-1 and 15-5 after the 'Rangs won match one 17-15. The K-25 Gashouse Gang trounced the Blacksmiths 15-3 and 15-12.

Round two saw The Pack pelt the Commodores 15-6 and 15-4. The Set Ups sank the Y-12 Old Men 15-6 and 15-10. The K-25 Hawks clipped the Eagles 15-11 and 15-6. Meanwhile, Y-12's Beavers, league champions par excellence, out-did the K-25 Gashouse Gang 15-0 and 15-7.

The semi-finals featured the Pack eliminating the Set Ups 15-2 and 15-7. The Beavers belted the K-25 Hawks 15-6 and 15-5.

The big match came later that night with The Pack winning 15-11 and 15-9.

Fullers to Host Meeting Of Medical Technologists

The Tennessee Society of American Medical Technologists is meeting Saturday, April 11, at the Holiday Inn, Oak Ridge. Registration will begin at 10 a.m.

The AMT will tour the American Museum of Atomic Energy Sunday. A banquet will highlight the evening Saturday.

James and Mary Fuller, medical technologists at ORGDP, are the East Tennessee Representatives on the society's board and are acting as hosts for this weekend's meeting.

NEWS

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UNION CARBIDE
CORPORATION



NUCLEAR DIVISION

JAMES A. YOUNG Editor

Member



American Association Industrial Editors

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EARLY VOLUNTEERS—Here Julian Marcum signs up early volunteers for the new Oak Ridge-Anderson County Red Cross Blood Program. Signing is R. S. Snead. Lined up are W. J. Grumbach, W. L. Erwin, David Alspaugh, Robert Green, and Perry Pryor.

Blood Donors Sought in Drive

(Continued from Page 1)
ing hours during one of the area visits of the Red Cross Bloodmobile. The Bloodmobile visit in Oak Ridge is set for April 24 at the National Guard Armory off Oak Ridge Turnpike.

Wilson Efforts Praised

Marcum praised the efforts of AEC employee Jack Wilson, chairman of the Oak Ridge Red Cross chapter, in getting the program started. He said officials in Clinton and Oak Ridge had worked a number of years on the project, but Wilson provided the leadership to push the program through.

Wilson learned about the need for an expanded blood program first-hand, Marcum said. While attending a 1967 United Fund kickoff breakfast in Knoxville, he became ill and was rushed to a Knoxville hospital. Internal bleeding required many pints of blood, and Wilson very nearly died. He remained in the intensive care unit for several days.

Although chairman of the Oak Ridge RC chapter, where he could have gotten blood through an existing volunteer local program

in connection with the Oak Ridge Hospital, Wilson was ineligible for free blood in Knoxville.

Pledge Fulfilled

Wilson pledged that, when and if he recovered, his time and effort would be devoted to meeting requirements for membership in the national RC blood program. Later, he thoroughly investigated the operation of the Red Cross Regional Center in Nashville, found that the operation was very successful, and prepared a proposal to join the program.

Gradually other "hard-working people joined the cause," Marcum said. Finally, after dozens of meetings, proposals and counterproposals, the Oak Ridge-Anderson County Red Cross Blood Program received all necessary approvals. "It's a dream come true for Jack and a blessing for the county," Marcum said. "But its success now depends entirely on us — the volunteer blood donors."

Carbide's Plastic Films Plants Set Expansions

A multimillion dollar expansion of Union Carbide's Films-Packaging Division plant at Ottawa, Ill., is expected to be completed soon. Elio E. Tarika, Division President, stated that major expansion programs are under way at the division's plastic films plants at Cartersville, Ga., and Wayne, N. J.

"The expansion of these plants is necessary," Tarika stated, "to meet increasing demands for our plastic film products both in the domestic and overseas markets. Included in the plant expansions are additional facilities for the production of Glad wrap and bags to meet the increasing demand for these products by the homemakers of America."

The Films-Packaging Division now operates four plants producing plastic films such as Zondel polyethylene, Udel polypropylene, Bakelite vinyl, Perflex polyethylene, and Visten vinyl for consumer and industrial packaging use. Three other plants of the division make cellulosic casings for the processing and packaging of sausage products by meat packers all over the world.

LIBRARY LISTINGS

As a continuing service, Nuclear Division News will publish representative lists of recent acquisitions by the libraries at the Oak Ridge facilities.

Oak Ridge Gaseous Diffusion Plant

Who's Who in Atoms; an International Reference Book, 5th ed. Future Ownership of the AEC's Gaseous Diffusion Plants. Hearings, 91st Congress, First Session. Modern Methods of Engineering Computation. R. L. Ketter.

Modern Developments in Gas Dynamics; Based Upon a Course on Modern Development in Fluid Mechanics and Heat Transfer, Given at University of California at Los Angeles. W. H. T. Loh.

Electro-Optical Systems Design Conference. (Proceedings)

Modern Electrochemistry, An Introduction to an Interdisciplinary Area (Vols. I and II). J. O'M. Bockris.

Mechanisms and Cams for Automatic Machines. C. N. Neklutin. Southern Standard Building Code.

Absorption, Distillation and Cooling Towers. W. S. Norman.

Electron Beam and Laser Beam Technology. L. L. Marton, Ed.

Oak Ridge National Laboratory

Water, Earth, and Man, A Synthesis of Hydrology, Geomorphology, and Socio-Economic Geography. Richard J. Chorley, Ed. (Central, 4500).

The Behavioral Sciences and the Federal Government. Advisory Committee on Government Programs in the Behavioral Sciences and National Research Council. Publication 1680. (Central, 4500).

Quantum Mechanics of Molecular Rate Processes. Raphael D. Levine. (Central, 4500).

Advanced Physical Chemistry, A Survey of Modern Theoretical Principles. S. M. Blinder. (Central, 4500).

The Edge of the Sea; The Sea Around Us; Under the Sea-Wind—A Naturalist's Picture of Ocean Life. Rachel L. Carson. (Biology, Building 9207, Y-12 Area).

Theory and Interpretation of Fluorescence and Phosphorescence. Ralph S. Backer. (Biology, 9207, Y-12 Area).

First Conference on the Clinical Delineation of Birth Defects. Daniel Bergsma, Ed. (Biology, 9207, Y-12 Area).

Geneva, World Health Organization reports: Pesticide Residues in Food; Cell-Mediated Immune Responses; Developments in Fertility Control; and Principles for the Testing and Evaluation of Drugs for Carcinogenicity. (Biology, 9207, Y-12 Area).

Topics in Functional Analysis, Notes by W. D. Laverell. Albert Wilansky and Lecture Notes in Mathematics. (Technical, 9711-1, Y-12 Area).

Advances in Plasma Physics. (Vol. 3). Albert Simon and William B. Thompson, Eds. (Technical, 9711-1, Y-12 Area).

Influence of Isotopy on the Physicochemical Properties of Liquids. Translated from the Russian. Izrail B. Rabinovich. (Technical, 9711-1, Y-12 Area).

Physical Metallurgy of Iron and Steel. Rajendra Kumar. (Technical, 9711-1, Y-12 Area).

Proceedings of the First All-Union Conference on Plasma Confinement in Closed Magnet Systems, Moscow, Fian, 15-19 April 1968. (Thermonuclear, 9201-2, Y-12 Area).



UNION CARBIDE CORPORATION

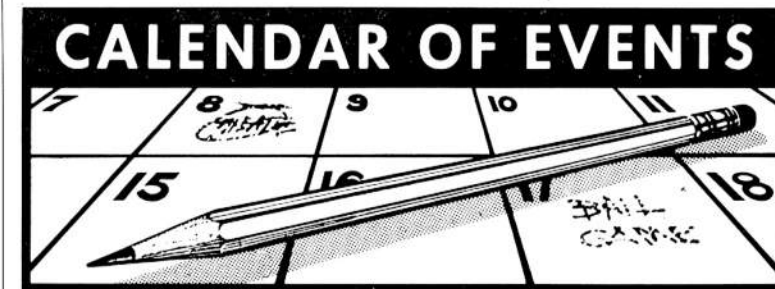
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TECHNICAL

April 10

H. W. Woolhouse, Botany Department, University of Leeds, will speak on "Plant Senescence," Biomedical Graduate School Lecture Series on the Biology of Aging, Large Conference Room, Building 9207, 12:15 p.m.

Ted McDonald, University of Tennessee, will speak on "Erythropoietin: Methods of Measurement," UT-AEC Agricultural Research Laboratory Seminar, UT-AEC Conference Room, 3 p.m.

"Environment at ORNL," J. L. Liverman, Reactor Division Seminar, Large Conference Room, Building 9204-1, 3 p.m.

"Dynamics of Nuclear Fission," C. Y. Wong, Physics Division Seminar, East Auditorium, Building 4500-N, 3:15 p.m.

Tennessee Chapter of the American Institute of Chemists. Carolyn Brown Memorial University Center, UT, opening session 10 a.m. Dinner — 5:30-7 p.m., University Center, followed by AIC President Emerson Venable speaking on "The Future of the AIC."

April 14

"Autoradiography," W. D. Gude. ORAU Medical Division Staff Seminar, ORAU Medical Division Main Conference Room, 4 p.m.

April 15

"LMFBR Solvent Extraction Flowsheet Developments," D. E. Horner and W. S. Groenier; "Separations of U-233 from the Daughters of U-232 by Ion Exchange," R. H. Rainey. Chemical Technology Division Seminar, Central Auditorium, Building 4500-N, 3 p.m.

April 16

American Society of Mechanical Engineers, 7 p.m. Elk's Club, Arkansas Ave., Oak Ridge. John Schacter, director of Atomic Energy Commission Combined Operations Planning, "Recent Developments in Venture Analysis."

COMMUNITY

April 10-11

Held Over!! The Oak Ridge Community Playhouse's studio production, "Feiffer's People." Oak Ridge Playhouse, 8:20 p.m. Admission: Free to season ticket holders; \$1 to public.

April 17

Oak Ridge Civic Ballet Association's Spring Performance. Guest artists, Judy Joseph and Ken Breisford, plus The University of Tennessee Dance Theatre, Oak Ridge High School Auditorium, Admission: Adults \$2.50; Students \$1.

April 18

ORCBA Spring Performance. Guest artists, Judy Joseph and Ken Breisford, Oak Ridge High School Auditorium, 8:15 p.m. Admission: Adults \$2.50; Students \$1.

April 19

Oak Ridge Art Center Film Club presents a Polish film, "Joan of the Angels," Jefferson Junior High School, 8 p.m. Admission: Adults \$1; Students 75¢.

April 20

Helen Bain, national president of the National Education Association will speak on the new image for teachers. 7:30 p.m. Oak Ridge High School auditorium. The public is invited.

April 21

Carbide Canoe Club, 7:30 p.m. Fellowship Hall, First United Presbyterian Church, Oak Ridge. "Wildlife along East Tennessee Rivers," a slide show.

Institute of Chemists Sets Conference at UT April 10

The Tennessee Chapter of the American Institute of Chemists will hold a conference at the Carolyn P. Brown Memorial University Center at The University, Friday, April 10. The meeting will open at 10 a.m. with an informal session. At 2:30 p.m., Dr. Hilton A. Smith, vice chancellor for graduate studies and research at UT, will speak on "Chemical Responsibility."

At 4 p.m., Dr. Ernest R. Gilmont, director of research and development for the A Gross and Company, Newark, N. J., will lead a panel discussion on "Chapter Organization." Other members of the panel will be Emerson Venable, president of the AIE, and Mrs. Natalie P. Holmes, also of AIC, New York.

Dinner will be held from 5:30 to 7 p.m. at the University Center, at UT, followed by AIC President Venable's address, "The Future of the AIC." Members and guests are invited to attend the afternoon and night sessions.

Information on the meeting may be obtained from Dr. John W. Prados, Knoxville telephone 974-3207; or Dr. R. P. S. Baker, Oak Ridge 483-6773.

New Project

(Continued from Page 1)
at the Oak Ridge Y-12 Plant for more than three years. This facility is also operated by Union Carbide for the AEC.

During the three-year period, more than 800 people have received industrial-type training at the Y-12 Plant in fields such as machining, electronics, laboratory technology, welding and drafting. Approximately 95 percent of the graduates are employed in full-time jobs.